

DP-309294

METHOD FOR MONITORING RESPIRATION AND
HEART RATE USING A FLUID-FILLED BLADDER

Abstract of the Disclosure

Respiration and heart rate are monitored using a fluid-filled bladder, where the bladder pressure is measured and processed to identify minute pressure variations corresponding to the respiration and heart rate of a subject that is directly or indirectly exerting a load on the bladder. The respiration rate is identified by band-pass filtering the measured pressure to isolate or extract a pressure component in range of 0.15-0.5Hz, and the heart rate is identified by band-pass filtering the measured pressure to isolate or extract a pressure component in the range of 2-7 Hz. The extracted pressure components are preferably converted to a digital format and tabulated for comparison with specified thresholds to identify abnormalities and/or anomalies.